

1. A non-circular recording medium on which a recording track is formed, the recording track comprising an optically readable or writable recording area, wherein:

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5. A non-circular recording medium on which a spiral track or a plurality of non-circular recording tracks are formed, wherein:

the spiral track or at least one of the plurality of non-circular recording tracks comprises a discontinuity; and

the spiral track or the plurality of recording tracks comprises a read only area where data is recorded beforehand, an additionally writing area where data is additionally rewritable, and a track information recording



10 present before and after the discontinuity in a rotating direction of the
recording medium and detected by said detecting means so that these data
continue.

8. The recording medium controlling apparatus according to claim 6,
wherein said detecting means comprises light cutoff detecting means for
20 detecting the discontinuity depending on if light applied to the recording
medium during rotation of the recording medium is cut off or not.

9. The recording medium controlling apparatus according to claim 6,
wherein said detecting means comprises position information detecting
25 means for detecting the discontinuity based on information on a position of
the discontinuity recorded on the recording medium or in an access control
driver.

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data combining means, responsive to the data reading being completed, for deleting data in the ineffective data reading area detected by said detecting means, and for combining the data recorded in the effective data recording areas.

12. A non-circular recording medium controlling apparatus for reading/writing data from/to a non-circular recording medium on which a read only area where data is recorded beforehand and an additionally writing area where data is additionally writable are provided, said apparatus comprising:

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13. The non-circular recording medium controlling apparatus according to claim 12, further comprising:

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14. A non-circular recording medium controlling apparatus for reading/writing data from/to a non-circular recording medium on which a read only area where data is recorded beforehand and an additionally

writing area where data is additionally writable are provided, said apparatus comprising:

driving means for rotating the non-circular recording medium;

irradiating means for irradiating with light a data recording track
5 that involves the read only area and the additionally writing area on the non-circular recording medium being rotated;

sensing means for sensing a reflection of the light, irradiated by said irradiating means, from the data recording track on the non-circular recording medium;

10 track shape detecting means for detecting the shape of the data recording track based on a result of the sensing by said sensing means; and

reading means for reading data recorded on the data recording track based on a result of the detection by said track shape detecting means.

15 15. The non-circular recording medium controlling apparatus according to claim 14, wherein:

said reading means comprises:

optical reading means for irradiating with light a predetermined position on the non-circular recording medium and for acquiring data from
20 the reflection of the light from the predetermined position; and

read controlling means, responsive to said track shape detecting means detecting that the data recording track has the shape of a circle that in turn has a discontinuity, for stopping operation of said optical reading means on the discontinuity and for storing data from a portion of the data
25 recording track involving the remainder of the circle acquired by said optical reading means.

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16. A method of controlling a non-circular recording medium that comprises a read only area where data is stored beforehand and an additionally writing area where data is writable additionally, the method comprising the steps of:

- 5 rotating the non-circular recording medium;
 irradiating with light a recording area of the non-circular recording medium being rotated in said rotating step;
 sensing a reflection of the irradiated light from the non-circular recording medium;
 10 controlling the irradiation of light on the recording area of the non-circular recording medium based on a result of the sensing of the reflection of the irradiated light; and
 acquiring data recorded in the recording area from the reflection of the light with which the recording medium was irradiated in the irradiating
 15 step.

17. A method of controlling a non-circular recording medium that comprises an optically readable recording area that, in turn, comprises a spiral data recording track or a plurality of concentric data recording tracks,
 20 the method comprising the steps of:
 rotating the non-circular recording medium;
 irradiating with light one of the data recording tracks on the non-circular recording medium being rotated in said rotating step;
 determining the shape of the data recording track based on a result
 25 of the sensing in said sensing step;
 sensing a reflection from that data recording track; and
 reading data recorded on the recording track based on a result of the

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determination in said determining step.

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